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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/543,628 04/05/00 IWAMOTO

N 30-5010 (4962)

EXAMINER

IM52/0823

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FEELY, M

ART UNIT

PAPER NUMBER

1712

DATE MAILED:

08/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/543,628

Applicant(s)

IWAMOTO, NANCY E.

Examiner

Michael J Feely

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 10-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

1. Applicant's election without traverse of claims 1-9, in Paper No. 8 is acknowledged.

#### *Claim Objections*

2. Claims 1-9<sup>are</sup> objected to because of the following informalities: Claims 1-9 claim "An electronic device"; however, nothing in the claims makes the article "electronic". The invention would have been more appropriately claimed as "An article". Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-9 claim ~~an~~ electronic device comprising a *first polymer* derived from an isocyanurate monomer with functional side chains selected from a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, a glycol ether, and adduct of glycol ether or a bisphenol glycol epoxy, and adduct of an epoxy glycol and an amine such as oxydianiline to form a hydroxylamine, an adduct of a glycol ether and a cycloaliphatic epoxy, and an adduct of hydroxyethyl side chain and a cycloaliphatic epoxy.

The disclosure fails to teach how this polymer is made. On page 14 of the Specification, the Applicant discloses, "Suitable materials that may be used to form the polymer and/or the

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substrate includes any chemical precursors, solvents, gases, and/or compounds that the researcher needs to construct the polymer or substrate.” Applicant continues by listing precursor materials, solvents, gases, and other material; however, the disclosure, including the Examples portion of the disclosure, fails to show how the *first polymer* is made from the monomer with specifically claimed side chains.

The closest the specification comes to teaching how the *first polymer* is made is in the description of Figure 13 on page 7. The description of Figure 13 explains a graph showing cohesive properties of 6 “novel formulations” including the reaction products of: trihydroxyethyl isocyanurate/trisepoxypropyl isocyanurate, trisepoxypropyl isocyanurate/oxydianiline, trisepoxypropyl isocyanurate/bisphenol A epoxy, trisepoxypropyl isocyanurate/oxybiscyclopentene oxide, trihydroxyethyl isocyanurate/trihydroxyethyl isocyanurate, oxybiscyclopentene oxide/bisphenol A epoxy. However, the disclosure fails to explain if or how these combinations result in the claimed *first polymer*.

This *first polymer* further comprises a group selected from oxybis(cyclopentene oxide), oxydianiline, Bisphenol A glycidyl epoxy, and bis 3,4 epoxycyclohexylmethyl adipate. It is unclear how these groups are incorporated into the claimed first polymer. It is uncertain if they are part of the claimed monomer structure or separate from the claimed monomer structure.

### ***Specification***

5. The disclosure is objected to because of the reasons set forth above it the 35 U.S.C. 112, first paragraph rejections.

Appropriate correction is required.

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*Claim Rejections - 35 USC § 102*

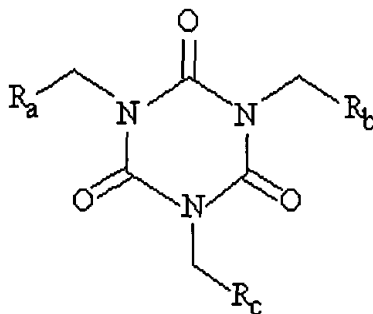
6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurihara et al. (US Pat. No. 4,366,062).

Regarding claim 1, Kurihara et al. disclose an article comprising a first monomer having the formula:



wherein each of  $R_a$ ,  $R_b$ ,  $R_c$  are independently selected from the group consisting of: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, a glycol ether, and adduct of glycol ether or a bisphenol glycol epoxy, and adduct of an epoxy glycol and an amine such as oxydianiline to form a hydroxylamine, an adduct of a glycol ether and a cycloaliphatic epoxy, and an adduct of hydroxyethyl side chain and a cycloaliphatic epoxy (column 3, lines 23-55).

Regarding claim 6, Kurihara et al. disclose the article of claim 1 wherein the first polymer further comprises a trishydroxyethylisocyanurate (column 3, lines 56-66).

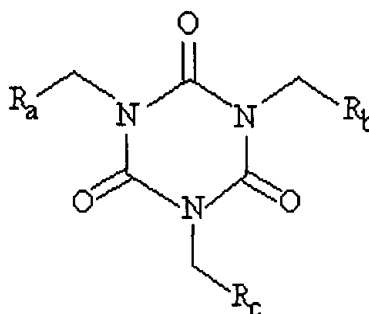
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Regarding claim 7, Kurihara et al. disclose the article of claim 1 wherein the article further comprises an interface between the first polymer and a substrate (column 3, lines 23-28).

Regarding claims 8 and 9, Kurihara et al. disclose the article of claim 1 wherein the article comprises an interface between the first polymer and a second polymer, wherein the first and second polymer are chemically different from each other (column 7, lines 5-16).

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hitachi Chem Co LTD (JP 01225641 A).

Regarding claim 1, Hitachi Chem Co LTD. disclose an article comprising a first monomer having the formula:



wherein each of  $R_a$ ,  $R_b$ ,  $R_c$  are independently selected from the group consisting of: a hydroxylated aliphatic side chain, an epoxy glycol, an ethoxy ether, a glycol ether, and adduct of glycol ether or a bisphenol glycol epoxy, and adduct of an epoxy glycol and an amine such as oxydianiline to form a hydroxylamine, an adduct of a glycol ether and a cycloaliphatic epoxy, and an adduct of hydroxyethyl side chain and a cycloaliphatic epoxy (Abstract *see translation*).

This rejection is supported by "novel formulation C" described on page 7 (lines 9-10) of the specification.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Feely whose telephone number is 703-305-0268. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Michael J. Feely  
August 19, 2001

A handwritten signature in black ink, reading "Robert A. Dawson". The signature is fluid and cursive, with the first name "Robert" and last name "Dawson" clearly legible.

Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700